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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,419	02/10/2004	Toshichika Takei	248795US2	9960

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EXAMINER	
LUU, CHUONG A	
ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

B/C

Office Action Summary	Application No.	Applicant(s)	
	10/774,419	TAKEI ET AL.	
	Examiner	Art Unit	
	Chuong A. Luu	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *13 and 14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-11 and 15-16 have been considered but are moot in view of the new ground(s) of rejection.

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The Rejections

Claims 1, 3-10 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sudani et al. (U.S. 4,874,564).

Sudani discloses a molding device with

(1) a heating plate (3) for heating the mask substrate having a front surface and a side surface;

heating means (2a, 3a) for heating the heating plate (3);

a frame member (1), having an inner peripheral surface and a first clearance between the inner peripheral surface and the side surface, being detachably disposed to the heating plate so that the frame member is disposed around (see Figure 2);

(3) wherein the side surface is curved in a concave shape (see Figure 2);

(4) wherein the side surface is curved in a convex shape (see Figure 2);

(5) wherein the side surface is a mirror surface (see Figure 2);

(6) wherein the side surface is a rough surface (see Figure 2);

(7) further comprising: a driving mechanism for moving the frame member so that a distance between the frame member and the side surface of the mask substrate placed on the heating plate varies (see Figure 2);

(8) further comprising: means for detecting a temperature of the mask substrate; a controlling portion for controlling the driving mechanism in accordance with the detected temperature (see Figure 2);

(9) wherein the controlling portion determines whether of the mask substrate is in a the temperature increasing state or in a constant state in accordance with the detected temperature, controls the driving mechanism so that the distance between the frame member and the side surface of the mask substrate placed on the heating plate becomes a first distance when the wherein the controlling portion temperature of the mask substrate is in the increasing state and a second distance smaller than the first distance when the temperature of the mask substrate is in the constant state (see Figure 2);

(10) wherein the frame member is divided along with the side surface in a peripheral direction of the mask substrate placed on the heating plate (see Figure 2);

(15) further comprising a supporting portion for movably supporting the frame member so that a second clearance is formed between the frame member and the heating plate (see Figure 2);

(16) wherein the frame member and the supporting portion comprise material having a heat conductivity (see Figure 2).

Claims 1, 3-10 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito (U.S. 20050089597 A1).

Ito discloses a heating-type vacuum press device with

(1) a heating plate (8, 11) for heating the mask substrate having a front surface and a side surface;

heating means (8, 11) for heating the heating plate (8, 11);

a frame member (3), having an inner peripheral surface and a first clearance between the inner peripheral surface and the side surface, being detachably disposed to the heating plate so that the frame member is disposed around (see Figure 1);

(3) wherein the side surface is curved in a concave shape (see Figure 1);

(4) wherein the side surface is curved in a convex shape (see Figure 1);

(5) wherein the side surface is a mirror surface (see Figure 1);

(6) wherein the side surface is a rough surface (see Figure 1);

(7) further comprising: a driving mechanism for moving the frame member so

that a distance between the frame member and the side surface of the mask substrate placed on the heating plate varies (see Figure 1);

(8) further comprising: means for detecting a temperature of the mask substrate; a controlling portion for controlling the driving mechanism in accordance with the detected temperature (see Figure 1);

(9) wherein the controlling portion determines whether of the mask substrate is in a the temperature increasing state or in a constant state in accordance with the detected temperature, controls the driving mechanism so that the distance between the frame member and the side surface of the mask substrate placed on the heating plate becomes a first distance when the wherein the controlling portion temperature of the mask substrate is in the increasing state and a second distance smaller than the first distance when the temperature of the mask substrate is in the constant state (see Figure 1);

(10) wherein the frame member is divided along with the side surface in a peripheral direction of the mask substrate placed on the heating plate (see Figure 1);

(15) further comprising a supporting portion for movably supporting the frame member so that a second clearance is formed between the frame member and the heating plate (see Figure 1);

(16) wherein the frame member and the supporting portion comprise material having a heat conductivity (see Figure 1).

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The Rejections

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sudani et al. (U.S. 4,874,564) or Ito (U.S. 20050089597 A1).

Sudani or Ito teaches everything above except for heating a semiconductor wafer having a diameter of 10 inches. However, heating a semiconductor wafer having a diameter of 10 inches being within the range is considered to be obvious. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify heating a semiconductor wafer having a diameter of 10 inches of Sudani or Ito 's device within the range as claimed for the purpose of providing a semiconductor wafer having a diameter of 10 inches, and it also has been held that where the general conditions of a claim are disclosed in the prior ad, discovering the optimum or workable ranges involves only routine skill in the art and it is noted that the applicant does not disclose criticality in the ranges claimed. In re Aller, 105 USPQ 233 (see MPEP j 2144.05).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong A. Luu whose telephone number is (571) 272-1902. The examiner can normally be reached on M-F (6:15-2:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chuong Anh Luu
Patent Examiner
May 5, 2006